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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,829	06/23/2003	Sam D. Finocchio	1314	9049

7590 12/15/2005  
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EXAMINER

CHARLES, MARCUS

ART UNIT PAPER NUMBER

3682

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

10/601,829

**Applicant(s)**

FINOCCHIO, SAM D.

**Examiner**

Marcus Charles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration:
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 04/02/04; 01/06/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This is the first action relating to serial application number 10/601,829, filed 06-23-2003.

Claims 1-17 are currently pending.

#### ***Drawings***

1. The drawings are objected to because the line and reference numeral are too fainted and needs to be bolder. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

#### ***Specification***

2. The disclosure is objected to because of the following informalities: The specification includes terminology, which is so different from that which is generally accepted in the art to which this invention pertains. The terms bearing race is inconsistence with the accepted meaning. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must adhere to the consistence meaning of the terms. See 112 second paragraph rejection on that matter for explanation.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not differentiate between the bore and the internally splined bore. Therefore, it would not be possible for one skilled in the art to allow the flow of fluid to flow through the bore and between the plurality of splines and the internally splined bore.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1, 16 and 17, the intended scope of the phrase "rotatable spline" is unclear and confusing because is not clear as to how a spline can include a shaft. A spline as defined by the Webster dictionary and is well known in the art as a wedge shaped component that is used on a shaft, in a bore or independently to connect to parts such as a shaft and wheel connection in order to prevent movement and relative rotation. The spline can be part of a shaft but the shaft cannot be part of a spline.

Claims 1-17 are further confusing because the claim makes reference to "an internally splined bore" and "said bore"; claim 14 also makes reference to the splined

bore and "said bore. Therefore, it is unclear if the bore and the internally splined bore are the same or different bores.

In claim 14, it is not clear as to what is meant by "the flow of lubricant to divert through said bore". In addition, it is not clear as to how the fluid can be diverted through the bore and between the splines and the splined bore. It appears that the bore is different from the splined bore.

In claim 10, it is not clear as to what is meant by "self contain".

In claims 1-17, it is not clear as to how the bearing race can be disposed between the bearing rings. It should be noted that it is known in the art and as quoted in the Webster dictionary that a bearing race is the rings between the ball and roller bearing rotates. In addition, it is unclear as to how the bearing race can include tapered bearings. It is well known in the art that bearing races is the section of the bearings that include the inner and out rings or inner and outer race. Therefore the term is not consistent with its accepted meaning.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "bearing race" in claims 1-17 is used by the claim to mean "the bearing roller", while the accepted meaning is "the rings around the bearing roller." The term is indefinite because the specification does not clearly redefine the term.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 7, 10-14 and 16-17 as understood, are rejected under 35

U.S.C. 102(b) as being anticipated by Caldwell et al. (3,785,458). In claim 1 as understood, Caldwell discloses a drive spline lubrication system comprising a housing (11), a rotatable splined shaft (22) disposed within the housing, the splined shaft having a first end, a second end and an external surface defining a plurality of extending splines; a gear (24) rotatable supported within the housing, the gear including an internally splined bore for receiving the externally splined shaft; a bearing (26 & 27) having first and second extremities and being disposed between the gear and the housing for supporting the gear (24); a shield disposed adjacent the extremities of the bearing, the shield (38/39) is capable of diverting the flow of lubricant flowing to the splined connection (25).

In claim 2, note the housing comprising two parts (12/13) and the gearing/splined shaft/bearing/shield enclosed therein.

In claim 3, it is apparent that the splined shaft is removably assembled within the splined bore.

In claims 4 and 5, note the gear includes a sleeve section (23) rotatable on the bearing and defining an annular collar section that cooperates with the bearing. In addition, the sleeve defines an internally splined bore section.

In claim 7, as understood, note the bearing includes inner and outer races (not labeled)

In claim 10, as understood, not the gear and bearings are contained within the bearings.

In claims 11-12, note it is apparent that the shield (38) is disposed downstream or upstream the bearing depending on the direction of the flow of the lubrication.

In claim 13, it is apparent that the shield is of an annular configuration.

In claims 16 and 17, Caldwell discloses the claimed invention above including the first part of the housing is capable of moving relative to the first part.

In claim 14, as understood, Caldwell et al. discloses the claimed invention (see col. 2-3). In col. 3, lines 33-43, note the fluid lubricates the splined connection (25).

***Claim Rejections - 35 USC § 103***

8. Claim 8 as understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell et al. in view of O'Brien (3,605,523). Caldwell et al. do not disclose the bearing includes a plurality ball bearing. It is well known that ball bearings reduce friction and reduced the effects of the combination of radial and axial forces, produces: low friction at high speed, low energy consumption, high reliability low consumption of lubricant and easy to mount and dismount. (JP (04-83999) discloses drive system comprising a housing (22), a gear (26) having an internal splined bore rotatable mounted in the housing and a plurality of ball bearings (28) supporting the gear in the housing. It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the bearing of Caldwell et al. with ball bearings in view of (JP (04-83999) since it is well known that ball bearings reduce friction, reduce the effects of the combination of radial and axial forces and produce: low friction at high speed, low

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energy consumption, high reliability-low consumption of lubricant and easy to mount and dismount.

9. Claim 9 as understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell et al. in view of JP (04-83999). Caldwell et al. does not disclose the bearing includes a plurality of tapered bearings. It is well known that tapered bearings reduce sliding and angular friction. O'Brien discloses a drive system comprising a plurality tapered bearings (20/22) supporting a rotatable internally splined gearing (16) in a housing. Therefore, it would have obvious to one of ordinary skill in that art to modify the bearings of Caldwell et al. so that they are tapered bearings in view of O'Brien in order to reduce sliding and angular friction.

#### ***Allowable Subject Matter***

10. Claims 6 and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Murry (5,119,905), Chen (5,88,930), Dunn (2,708,246), Stark et al. (4,223,579), Thomson (3,230,796) and JP (04-83999) disclose a splined shaft connected to a gear having an internally splined bore and disposed in a housing.




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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Marcus Charles  
Primary Examiner  
Art Unit 3682  
December 10, 2005